REMARKS

Claims 1-38 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests withdrawal of the rejections and forwarding of the application onto issuance.

Office Communication

Preliminarily, Applicant points out that on page 2 of the Office's response (mailed 07/14/2004), heading number "4" states that "[c]laims 1-7, 9-11,13-14, 16-24, 26-27 are rejected under 35 U.S.C. § 102(e) as being anticipated by Leeke et al. (US Patent No. 6,587,127 B1)." However, claim 22 is not discussed under this section, but is instead included and discussed under the 35 U.S.C § 103 claim rejections beginning on page 12 of the Office's response. In addition, heading number "4" on page 2 of the response does not include claims 25, 31, or 32; however, these claims are discussed in regards to this heading on pages 8, 5, and 9 respectively. Accordingly, Applicant has proceeded under the assumption that the Office intended to include claim 22 on page 12 (under the 35 U.S.C § 103 rejections) and claims 25, 31, or 32 under the 35 U.S.C. § 102 claim rejections beginning on page 2. Applicant requests that any necessary corrections to the record be made.

Additionally, Applicant additionally points out that on page 13 of the response, the Office states: "[a]s to claims 8, 12, 15, 22, 28, 33, ***Milne and Jang*** do not explicitly ...". Applicant has proceeded under the assumption that the Office intended to refer to ***Leeke and Chang,*** rather than Milne and Jang.

Applicant requests that any necessary corrections to the record be made.

Finally, heading "5" on page 9 summarizes 35 U.S.C. § 102(e) and rejects claims regards to the Chang reference. However, subsequent pages 10-12 include references to "Leeke" or "Milne" in the discussion of claims 30, 35, 36, 37, and 38 when it appears that the Office intended to type "Chang" (considering the citations and the initial heading on page 9).

Accordingly, Applicant has proceeded under the assumption that the Office intended to cite to "Chang" in regards to these claims and only inadvertently left "Leeke" or "Milne". Applicant requests that any necessary corrections to the record be made.

§102 and §103 Rejections

Claims 1-7, 9-11, 13-14, 16-21, 23-24, and 26-27 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,587,127 to Leeke et al. (hereinafter "Leeke").

Claims 29-30 and 34-38 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,715,126 to Chang et al. (hereinafter "Chang").

Claims 8, 12, 15, 22, 28, and 33 stand rejected under 35 U.S.C. §103(a) as being obvious over Leeke, in view of Chang.

Before discussing the clarifying amendments above, and the substance of the Office's rejections, a short discussion of Applicant's disclosure, as well as the Leeke and Chang references is provided to assist the Office in appreciating the patentable distinctions in Applicant's various claimed embodiments.

Applicant's Disclosure

Perhaps a good place to start to appreciate the various claimed embodiments in the present application is the "Background" section of the application. There, various problems associated with visualizations are described. Specifically, starting on page 1, line 12, the application states as follows:

> One problem associated with prior art media players is they all tend to display different types of media in different ways. For example, some media players are configured to provide a "*visualization*" when they play audio files. ***A visualization is typically a piece of software that "reacts" to the audio that is being played by providing a generally changing, often artistic visual display for the user to enjoy.***
>
> ***
>
> [T]here are problems associated with prior art visualizations. As an example, consider the following. One of the things that makes visualizations enjoyable and interesting for users is the extent to which they "mirror" or follow the audio being played on the media player. Past visualization technology has led to visualizations that do not mirror or follow the audio as closely as one would like. This leads to things such as a lag in what the user sees after they have heard a particular piece of audio. It would be desirable to improve upon this media player feature.

An inventive approach to visualizations is presented that provides better synchronization between a visualization and its associated audio stream. In one embodiment, ***visualizations are synchronized with an audio stream using a technique that builds and maintains various data structures***. Each data structure can maintain data that is associated with a particular audio sample. The maintained data can include a timestamp that is associated with a time when the audio sample is to be rendered. The maintained data can also include various characteristic data that is associated with the audio stream. When a particular

audio sample is being rendered, its timestamp is used to ***locate a data structure having characteristic data***. The characteristic data is then used in a visualization rendering process to ***render a visualization***.

Applicant calls the Office's attention to figures 8 and 9 in the disclosure in regards to the following discussion. Referring to both Figs. 8 and 9, as the audio samples stream into the ***preprocessor*** 804, it ***builds and maintains*** a collection of data structures indicated generally at 806. Each audio sample that is to be played by the media player has an associated data structure that contains data that characterizes the audio sample. These data structures are indicated at 806a, 806b, and 806c. ***The characterizing data is later used to render a visualization that is synchronized with the audio sample when the audio sample is rendered.***

The preprocessor comprises a ***timestamp module*** 900 (Fig. 9) that ***provides a timestamp*** for each audio sample. The timestamps for each audio sample are maintained in a sample's data structure (Fig. 9). The timestamp is assigned by the timestamp module to the audio sample based on when the audio sample is calculated to be rendered by the media player. Preprocessor 804 also ***preprocesses each audio sample to provide characterizing data*** that is to be subsequently ***used to create a visualization*** that is associated with each audio sample.

In one embodiment, the preprocessor 804 comprises a spectrum analyzer module 902 (Fig. 9) that uses a Fast Fourier Transform (FFT) to convert the audio samples from the time domain to the frequency domain. The FFT breaks the audio samples down into a set of 1024 frequency values or, as termed in this document, "frequency data." The frequency data for each audio sample is then maintained in the audio sample's data structure. In addition to maintaining the frequency data, the preprocessor 804 can include a ***waveform analysis module*** 904 that ***analyzes***

the audio sample to provide waveform data. The preprocessor 804 can also includes a ***stream state module*** 906 that provides data associated with the state of the audio stream (i.e. paused, stopped, playing, and the like).

Fig. 8 also shows audio rendering object or VisHost 608. Associated with the audio rendering object are various so-called effects. In the illustrated example, the effects include a dot plane effect, a bar effect, and a ambience effect. The effects are essentially software code that plugs into the audio rendering object 608. Typically, such effects can be provided by third parties that can program various creative visualizations. The effects are responsible for ***creating a visualization*** in the unified rendering area 406.

In the illustrated and described embodiment, the ***audio rendering object*** operates in the following way to ensure that any visualizations that are rendered in unified rendering area 406 are synchronized to the audio sample that is currently being rendered by renderer 810. The audio rendering object has an associated target frame rate that essentially ***defines how frequently the unified rendering area is drawn, redrawn or painted.*** As an example, a target frame rate might be 30 frames per second. Accordingly, 30 times per second, the audio rendering object issues what is known as an invalidation call to whatever object is hosting it. The invalidation call essentially notifies the host that it is to call the audio rendering object with a Draw or Paint command instructing the rendering object 608 to render whatever visualization is to be rendered in the unified rendering area 406. When the audio rendering object 608 receives the Draw or Paint command, it then takes steps to ascertain the preprocessed data that is associated with the currently playing audio sample. Once the audio rendering object has ascertained this preprocessed data, it can issue a call to the appropriate effect, say for example,

the dot plane effect, and provide this preprocessed data to the dot plane effect in the form of a parameter that can then be used to ***render the visualization***.

Material in the specification that describes the visualization embodiments begins on page 15 at line 18. The references cited by the Office, by and large, do not deal with *visualizations* as that term is contemplated and used in the present application.

The Leeke Reference

Leeke describes a method in which a server interacts with users to provide personalized content to each of the users. Personalized content is sent to a first user by communicating first audio or other content associated with a broadcast to a first user location. Second content is selected and a first signal is communicated to the first user location dependent on the user profile. The second content can include second audio content selected in dependence upon the first user profile, in which case playback of the second audio content is synchronized with respect to playback of the first audio content.

Thus, Leeke pertains to what is probably best thought of as coordinating different types of media in a way that corresponds to particular preferences and dictating what content is played at any particular time.

For instance, various embodiments can provide an Internet-based digital audio service that combines an audio player interface with audio content. Users are able to access audio-on-demand through an archive of music and spoken word titles, and are able to tune to live radio broadcasts from around the world. ***Further, content information is integrated with content distribution.*** In this way, an end

user can obtain information about content to which he/she is listening. Additionally, the end user is provided a means for purchasing the content, such as music content, to which he/she is listening.

Thus, Leeke is concerned about which particular content is being played and when it is played, rather than actually rendering a visualization, as that term is understood in the context of Applicant's disclosure. When viewed in the context of the claimed subject matter, it becomes apparent that the claimed embodiments really pertain to subject matter that is quite different from the subject matter disclosed in Leeke.

The Chang Reference

Chang describes a method for delivering a presentation of web content so that ***one or more other images or events are displayed at predetermined time increments in the media presentation***. Chang instructs that the entire presentation is delivered in streaming fashion, so that the end user does not have to wait for the entirety of the content data to be downloaded before starting the presentation, but rather can start viewing and listening to the presentation after a relatively short delay period.

An authoring tool for creating such composite time-synchronous content ***automatically determines the necessary information for scheduling player requests to the servers***. This information, together with the actual presentation content, is sent to a special player which can interpret the information and act according to its instructions.

Chang, like Leeke, is concerned about which and when particular content is being played, rather than actually rendering a visualization. When viewed in the

context of the claimed subject matter, it becomes apparent that the various claimed embodiments are really concerned with something that is quite different from Chang.

Claims Rejected over Leeke under § 102

Claim 1 was previously amended and recites a system for synchronizing a visualization with audio samples comprising:

- one or more audio sources configured to provide audio samples that are to be rendered by a media player;
- an audio sample pre-processor communicatively linked with the one or more audio sources and configured to receive and pre-process audio samples before the samples are rendered, the pre-processing providing characterizing data associated with each sample, wherein the characterizing data is derived from the audio samples; and
- one or more effects configured to receive the characterizing data and use the characterizing data to render a visualization that is synchronized with an audio sample that is being rendered by the media player.

In making out the rejection of this claim, the Office argues that Leeke teaches:

(1) one or more audio sources configured to provide audio samples, and cites to column 5, lines 17-48;

(2) an audio sample pre-processor communicatively linked with the one or more audio sources and configured to receive and pre-process audio samples before the samples are rendered, the pre-processing providing characterizing data associated with each sample, wherein the characterizing data is derived from the audio samples, and cites to column 9, lines 17-26, column 15, lines 28-64 and column 14, lines 44-51; and

(3) one or more effects configured to receive the characterizing data and use the characterizing data to render a visualization

that is synchronized with an audio sample that is being rendered by the media player, and cites to column 9, lines 28-99, column 13, lines 13-22, column 14, lines 31-44, and column 16, lines 11-24.

Applicant respectfully submits that Leeke does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (2) above, these portions of Leeke do not discuss a pre-processor or pre-processing as claimed and defined in Applicant's specification.

Leeke's column 9, lines 17-26 discusses buttons on a graphical user interface where three attribute fields can be selected. Leeke's column 15, lines 28-64 describes a graphical user interface where various information can be displayed to assist a user in navigating. Additionally, Leeke's column 14, lines 44-51 describes a logo which, as an example of auxiliary information, can act as a control to initiate a hyperlink. Applicant has reproduced the portions cited by the Office in regards to this claim below for the Office's convenience.

Column 9, lines 17-26:

For radio content, the three attribute fields 262, 264, and 266 include a category attribute field, a band attribute field, and a location attribute field. For events, the three attribute fields 262, 264, and 266 include a category attribute field, a time attribute field, and an event attribute field. For library content, the three attribute fields 262, 264, and 266 include a category attribute field, an author attribute field, a title attribute field. For music content, the three attribute fields 262, 264, and 266 include a category attribute field, an artist attribute field, and a title attribute field.

Column 15, lines 27-64:

An indication 456 is displayed if the event is live. If the event is archived, the indication 456 is replaced by the date that the event occurred.

A start time 460 and an end time 462 on the graphical time scale 450 may be specified in a preference. However, the default is

to present the start time 460 and the end time 462 based on the actual occurrence of the event. Alternatively, a timeline indicating an amount of time that the end user has been listening to the event can be displayed. This timeline is preferred in cases where there is an inaccurate record of the original recording.

For live events having an uncertain length (e.g. a sporting event), an estimated timeline is initially displayed. Should the duration of the event go beyond the estimated timeline, an updated timeline is displayed with a start time set to the end time of the estimated timeline.

For an archived event, the time marker 452 can be advanced and reversed using the advance/review controls 206. For a live event, the advance/review controls 206 are not active. To indicate this to the end user, the advance/review controls 206 are displayed in a first color, such as grey, rather than a second color, such as black, for a live event.

The graphical user interface provides multiple ways to navigate to an event. One way includes using the selection attribute indicators 214 to select an event having chosen attributes. Attribute selection is performed in a manner described with reference to FIG. 3. In the events category, selection of an "ALL" option produces a list of all events.

The category attribute field 262 allows the end user to limit the events to at least one particular category or format. A plurality of categories or formats can be selected by holding down the shift key while selecting the options. In this way, the end user can repeatedly select options from the list without forcing the attribute selection to move to the next field. Text displayed within the category attribute field 262 includes the first chosen category followed by dots to indicate more than one category.

Column 14 lines 44-51:

The auxiliary information can also include promotional advertising provided by the station, such as a logo 410 or another image, and one or more links to related sites on the electronic network. The logo 410 acts as a control to initiate a hyperlink to a destination in the electronic network 100, such as to a home page of the radio station. Another window is opened to present information from the destination.

None the subject matter in these excerpts describes or in any way suggests the subject matter that the Office contends it does. Hence, for at least this reason, this claim is not anticipated by Leeke.

Further, with regards to item (3) above, the referenced portions of Leeke do not discuss *effects* configured to receive the characterizing data and use the characterizing data to *render a visualization* as claimed.

Leeke's column 9, lines 28-39 discusses selecting a button on the graphical user interface to display attribute fields and options that can be associated with each attribute field. Leeke's column 13, lines 13-22 discusses how a plurality of categories or formats can be chosen. Leeke's column 14, lines 32-44 discusses the display of auxiliary information, including an option to receive user-initiated events to display more auxiliary information about a song. Finally, Leeke's column 16, lines 11-24 indicates that upon selecting the event attribute field, a corresponding list of sorted events with headings is displayed.

Missing from these references is any teaching, disclosure or suggestion regarding one or more *effects* configured to receive any characterizing data and use the characterizing data to render a visualization as claimed. Applicant has reproduced the portions cited by the Office in regards to this claim below for the Office's convenience.

> Column 9, lines 28-39:
>
> A selection of the select button 260 directs the next attribute field to be displayed along with its associated options. For example, clicking the select button 260 while the band attribute field 264 is active causes the location attribute field 266 to become active, as illustrated.
>
> A list of options 270 associated with an active attribute is displayed next to the three attribute fields 262, 264, and 266. The end user can scroll through the list using a scroll bar 272, an up

scroll control 274, and/or a down scroll control 276. The end user can also navigate to an option by entering either a letter or a number of an item in the list of options 270.

Column 13, lines 13-22:

The category attribute field 262 allows the end user to limit the dial to at least one particular category or format. A plurality of categories or formats can be selected by holding down the shift key while selecting the options. In this way, the end user can repeatedly select options from the list without forcing the attribute selection to move to the next field. Text displayed within the category attribute field 262 includes the first chosen category followed by dots to indicate more than one category.

Column 14, lines 32-44:

FIG. 9 is an example of the second display region 222 providing auxiliary information about a particular station. The auxiliary information is displayed in response to receiving a user-initiated selection of the information control 220. The auxiliary information can include a title of a current song being played by the station, an artist associated with the song, an album containing the song, a label for the song, and an image of the album cover art. An option 402 is designated to receive a user-initiated event to display more auxiliary information about the song. An option 404 is designated to receive a user-initiated event to purchase the song or an album containing the song. An option 406 is designated to receive a user-initiated event to display a programming guide.

Column 16, lines 11-24:

FIG. 13 is an example illustration of using the event attribute field 266. Upon selecting the event attribute field 266, a list of events 480 defined by the category attribute field 262 and the time attribute field 264 is displayed. The list of events 480 has a first column to display the name of the event, and a second column to display the date and start time of the event. Displayed at the top of the list are headings 482 and 484 which can be selected to initiate an sort of the events 450 by event name (alphabetically) or by start time (numerically), respectively. The current field by which the events 480 are sorted is indicated by underlining its associated heading (e.g. the heading 482 is illustrated as underlined to indicate that the events 480 are alphabetically sorted by event name). By default, the events 480 are sorted by event name.

In its response, the Office offers no explanation as to why these cited portions of Leeke anticipate this claim other than to reiterate "Leeke teaches...". Applicant respectfully submits that the Office has not explained the pertinence of the cited portions or fully and clearly stated the grounds for its rejection of this claim, as required. See, e.g., MPEP 707.05 (pertinence of cited prior art should be pertinence should be explained) and MPEP 707.07(d) (grounds for rejection fully and clearly stated). Nevertheless, the disparity between these cited portions and this claim is readily apparent from even a cursory review of the reference and the claimed subject matter. Accordingly, because Leeke does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claims 2-8 depend from claim 1 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 1, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. Given the allowability of these claims, the rejection of claim 8 over the combination with Chang is not seen to add anything of significance.

Claim 9 was previously amended and recites a media player comprising:

- an audio sample pre-processor configured to receive and pre-process audio samples before the samples are rendered by the media player, the pre-processing providing frequency data associated with each sample, wherein the frequency data is derived from the audio samples; and
- one or more effects configured to receive the frequency data and use the frequency data to render a visualization that is synchronized with an audio sample that is being rendered by the media player.

In making out the rejection of this claim, the Office argues that Leeke teaches:

> (1) an audio sample pre-processor configured to receive and pre-process audio samples before the samples are rendered by the media player, the pre-processing providing frequency data associated with each sample, wherein the frequency data is derived from the audio samples, and cites to column 12, lines 21-27, column 29, lines 44-63 and column 30, lines 39 to column 31, line 17; and
>
> (2) one or more effects configured to receive the frequency data and use the frequency data to render a visualization that is synchronized with an audio sample that is being rendered by the media player, and cites to column 12, lines 21-27, column 29, lines 44-63 and column 30, lines 39 to column 31, line 17.

Applicant respectfully submits that Leeke does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (1) above, these portions of Leeke do not discuss a pre-processor or pre-processing as claimed and defined in Applicant's specification. Applicant has reproduced the portions cited by the Office in regards to this claim below for the Office's convenience.

> Column 12, lines 21-27:
>
> Above and below the graphical pointer 332 are text boxes 334 and 336 containing information about a radio station at the current position. The information can include call letters 340, a frequency 342, a format 344, and a city of origin 346 associated with the radio station. As the graphical pointer 332 is moved from station to station, the information in the text boxes 334 and 336 is updated accordingly.
>
> Column 29, lines 44-63:
>
> FIGS. 41 to 43 are block diagrams summarizing a site map for an embodiment of the graphical user interface. The site map illustrates potential user-selectable flow paths between different features of the graphical user interface.

The end user can select between a high bandwidth interface (block 1010) and a low bandwidth interface (block 1012) for the audio player. For example, the high bandwidth interface may include code specific for an animation plug-in, such as Shockwave, whereas the low bandwidth interface may include only HTML code. Thereafter, a main page of the interface is provided in accordance with the user-selected bandwidth.

From the main page, the end user can navigate to a radio content feature (block 1014), an events content feature (block 1016), a library content feature (block 1020), a music content feature (block 1022), a rating room (or listening booth) feature (block 1024), a preferences feature (block 1026), a features feature (block 1030), a search feature (block 1032), and a contact feature (block 1034).

Column 30, lines 39 to column 31, line 17:

FIG. 44 is a flow chart summarizing steps performed in an embodiment of a method of playing first audio content using a computer. As indicated by block 1200, a step of displaying a graphical radio dial indicating the first audio content is performed. As described earlier, the graphical radio dial can include an alphabetical scale and a graphical pointer. In this case, the graphical pointer can be positioned with respect to the alphabetic scale based upon text identifying the first audio content. Alternatively, the graphical radio dial can indicate an over-the-air frequency associated with the first audio content. In this case, the graphical radio dial can include a numerical scale and a graphical pointer, wherein the graphical pointer is positioned with respect to the numerical scale based upon the over-the-air frequency.

Optionally, the method includes a step of receiving a user-initiated selection of the first audio content from a plurality of audio content using the graphical radio dial (as indicated by block 1202). The step of receiving the user-initiated selection can include receiving a user-initiated action to navigate to the first audio content from second audio content adjacently indicated by the graphical radio dial.

As described earlier, the graphical radio dial can include a plurality of marks associated with a plurality of audio content having at least one attribute. For broadcasts, the at least one attribute includes at least two of a category attribute, a band attribute, and a location attribute. The band attribute can indicate one of an AM band, an FM band, and an Internet band for broadcasts. Optionally, a step (block 1204) of receiving a user-initiated selection of a preset associated with the at least one attribute is performed.

> The plurality of marks includes a first mark associated with the first audio content. In this case, the step of receiving the user-initiated selection of the first audio content can comprise steps of receiving the at least one attribute, determining the plurality of audio content based upon the at least one attribute, and receiving a user-initiated selection of the first mark.
>
> As indicated by block 1206, a step of receiving data via an electronic network is performed. The data encodes the first audio content. If the data includes streamed data received via the Internet, the method further comprises the step of decoding the streamed data, as indicated by block 1210. As indicated by block 1212, a step of playing the first audio content is performed.

Leeke's column 12, lines 21-27 describes text boxes containing information about a radio station at the current position. Nothing indicates that audio samples are ***pre-processed*** thus providing frequency data associated with each sample. Perhaps more importantly, nothing indicates frequency data is ***derived*** from the audio samples. The information described is simply "***about*** a station at the current position." Leeke's column 29, lines 44-63 discusses a selection of high and low bandwidth interface and the ability to navigate from a main page. Nothing in this section discusses an audio sample pre-processor or pre-processing as claimed. Finally, column 30, lines 39 to column 31, line 17 discusses steps in playing first audio content using a computer. However, nothing discusses an audio sample pre-processor or pre-processing as claimed. Accordingly, for at least this reason, this claim is allowable.

With regards to item (2) above, those portions of Leeke cited (reproduced above) do not discuss *effects* configured to receive the characterizing data and use the characterizing data to ***render*** a visualization as claimed. As in its rejection of claim 1, the Office offers no explanation as to why the Office has concluded that these cited portions of Leeke anticipate this claim.

Because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claims 10-12 depend from claim 9 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 9, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. Given the allowability of these claims, the rejection of claim 12 over the combination with Chang is not seen to add anything of significance.

Claim 13 was previously amended and recites a system for synchronizing a visualization with audio samples comprising:

- an audio sample pre-processor configured to receive and preprocess audio samples before the samples are rendered by a renderer that comprises part of a media player, the audio sample preprocessor preprocessing the samples to provide characterizing data derived from each sample, the characterizing data comprising a timestamp associated with each audio sample, the timestamp being assigned in accordance with when the audio sample is calculated to be rendered by the renderer;
- multiple data structures configured to hold the characterizing data, each data structure being associated with an audio sample;
- an audio rendering object configured to call the audio sample pre-processor to ascertain the characterizing data associated with an audio sample that is currently being rendered by the renderer;
- the audio sample pre-processor being configured to ascertain said characterizing data by querying the renderer for a time associated with the currently-rendered audio sample, and then using said time to identify a data structure having a timestamp that is nearest in value to said time; and
- one or more effects configured to receive characterizing data that is associated with the data structure having the timestamp that is nearest in value to said time, and use the characterizing data to render a visualization that is synchronized with the audio sample that is being rendered by the renderer.

In making out the rejection of this claim, the Office argues that Leeke teaches:

(1) an audio sample pre-processor as recited and cites to column 5, lines 17-48, column 9, lines 17-26, column 15, lines 28-64, and column 14, lines 44-51;
(2) multiple data structures configured to hold the characterizing data, each data structure being associated with an audio sample, and cites to column 10, lines 49-65;
(3) an audio rendering object as recited and cites to column 5, lines 17-48, column 9, lines 17-26;
(4) the audio sample pre-processor as recited and cites to column 15, lines 28-64;
(5) one or more effects as recited and cites to column 15, lines 28-49.

Applicant respectfully submits that Leeke does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (1) above, these portions of Leeke do not discuss a pre-processor or pre-processing as claimed and defined in Applicant's specification. Leeke's column 5, lines 17-48 discusses a multimedia player that is responsive to a smart card, can cooperate with a browser program, or can include a stand-alone, application-based software program. Accordingly, there is no reference or discussion of an audio sample pre-processor as claimed. Further, the cited portions of Leeke's columns 9, 14, and 15 do not disclose or discuss of an audio sample pre-processor as claimed and defined in Applicant's specification. Applicant has reproduced the portions cited by the Office in regards to this claim below for the Office's convenience.

Column 5, lines 17-48:

> The player 142 is responsive to either a smart card 146 or a virtual smart card stored at one or more of the client apparatus 106 and the server 102. The actual or virtual smart card can be used to separate access to content from the content itself. Further, the actual or physical smart card can act as a preference key to uniquely personalize a player for an individual in a consistent manner across all entry points or platforms. For a virtual smart card in this case, the client side provides a key to the server side of the preferences.
>
> Optionally, the player 142 can provide a second visual interface having a smaller window that appears in the background. The smaller window provides a subset of the controls of the full graphical user interface. The subset of controls can include controls for selecting between programmed presets. For example, the smaller window can illustrate the presets.
>
> The player 142 can cooperate with a browser program and/or a streaming audio plug-in program executed by the client apparatus 106. Examples of the browser program include, but are not limited to, Netscape Navigator and Microsoft Internet Explorer. Examples of the streaming audio plug-in program include, but are not limited to: RealAudio and RealPlayer from Real Networks, VxTreme and Netshow from Microsoft Corporation, VDOnet from VDO, TrueStream from Motorola, LiquidAudio, and other active streaming formats. Alternatively, the player 142 can include a stand-alone, application-based software program that is executed by the client apparatus 106. In this case, it is preferred that the software program be operable without requiring interaction with a browser program. The software program cooperates with a network access routine executed by the client apparatus 106.

In regards to item (2) above, the Office cites Leeke's column 10, lines 49-65 (reproduced above) and asserts that it teaches multiple data structures configured to hold the characterizing data, each data structure being associated with an audio sample. The cited portion of Leeke discusses controls that can be provided to rearrange stored presets, and makes no mention of multiple data structures configured to hold the characterizing data as claimed.

Regarding item (3) above, the Office cites column 5, lines 17-48 and column 9, lines 17-26 (reproduced above) and argues these portions teach an audio

rendering object as claimed. As discussed above, column 5, lines 17-48 discusses a multimedia player that is responsive to a smart card, can cooperate with a browser program, or can include a stand-alone, application-based software program; and column 9, lines 17-26 discuss buttons on a graphical user interface where three attribute fields can be selected. Nothing indicates or discusses an audio ***rendering*** object configured to call an ***audio sample pre-processor*** as claimed.

Regarding item (4) above, there is no reference or discussion of an audio ***sample pre-processor*** as claimed. Similarly, regarding item (5), column 5, lines 17-48 does disclose or suggest one or more effects configured to receive characterizing data that is associated with the data structure as claimed.

Again, the Office offers no explanation as to why the Office has concluded that these cited portions of Leeke anticipate this claim. Nevertheless, because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claims 14-20 depend from claim 13 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 13, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. Given the allowability of these claims, the rejection of claim 15 over the combination with Chang is not seen to add anything of significance.

Claims 21 was previously amended and recites a system for processing audio samples comprising:

- a timestamp module for assigning timestamps to audio samples that are to be rendered by a media player renderer;

- a spectrum analyzer for processing the audio samples to ***derive*** frequency data ***from*** the audio samples;
- multiple data structures each of which being associated with an audio sample, the data structures each containing timestamp data and frequency data for its associated audio sample; and
- the system being configured to use the timestamp data to ascertain a data structure associated with an audio sample that is currently being rendered by the media player renderer and provide the frequency data associated with that audio sample so that the frequency data can be used to render a visualization associated with that audio sample.

In making out the rejection of this claim, the Office argues that Leeke teaches:

(1) a timestamp module as recited, citing to column 15, lines 27-64;
(2) a spectrum analyzer as recited, citing to column 29, lines 44-63, and column 30 line 39 to column 31, line 17;
(3) multiple data structures as recited, citing to column 15, lines 27-64 and column 29, lines 44-63; and
(4) a system configured to use the timestamp data to ascertain a data structure associated with an audio sample and provide the associated frequency data so that the frequency data can be used to render a visualization associated with that audio sample, citing to column 30, lines 39 to column 31, line 17.

Applicant respectfully submits that Leeke does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (2) above, the cited portions (reproduced above) do not discuss a spectrum analyzer as claimed. Leeke's column 29, lines 44-63 discusses a selection of high and low bandwidth interface and the ability to navigate from a main page. Nothing discusses a spectrum analyzer for processing the audio samples to ***derive*** frequency data ***from*** the audio samples. Finally, Leeke's column 30, line 39 to column 31, line 17 discusses steps in playing first audio content using a computer. However, nothing

discloses or even suggests a spectrum analyzer as claimed and defined in Applicant's specification.

Regarding item (3) above, the Office cites Leeke's column 15, lines 27-64 and column 29, lines 44-63 which are reproduced above. The cited portion of column 29 describes allowing a user to choose between different bandwidths, with a different interface provided depending on the choice made. However there is no disclosure or suggestion of timestamp data, frequency data, or even multiple data structures, each being associated with an audio sample. The cited portions of column 15 discuss time, but only in relation to a start or end time; or alternatively the amount of time the end user has been listening to an event. Again, there is no reference or discussion involving multiple data structures as claimed. Finally, regarding item (4) above, nothing in the cited portions of column 30 describes a system being configured as claimed.

Again, the Office offers no explanation as to why the Office has concluded that these cited portions of Leeke anticipate this claim. Nevertheless, because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claim 22 depends from claim 21 and is allowable as depending from an allowable base claim. This claim is also allowable for its own recited features which, in combination with those recited in claim 21, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. Given the allowability of this claim, the rejection of claim 22 over the combination with Chang is not seen to add anything of significance.

Claim 23 was previously amended and recites a method of providing a visualization comprising:

- receiving multiple audio samples;
- pre-processing the audio samples before they are rendered by a media player renderer, the pre-processing deriving characterizing data from each sample;
- determining when an audio sample is being rendered by the media player renderer; and
- responsive to said determining, using the characterizing data that is associated with the audio sample that is being rendered to provide a visualization.

In making out the rejection of this claim, the Office argues that Leeke teaches:

(1) receiving multiple audio samples, and cites to column 5, lines 17-48;
(2) pre-processing the audio samples as recited, and cites to column 9, lines 17-26; column 15, lines 28-64 and column 14, lines 44-51;
(3) determining when an audio sample is being rendered by the media player renderer, and cites to column 5, lines 17-58; and
(4) responsive to said determining, using the characterizing data that is associated with the audio sample that is being rendered to provide a visualization, and cites to column 5, lines 17-58.

Applicant respectfully submits that Leeke does not disclose or suggest the subject matter of this claim. With regards to item (2) above, the cited portions of columns 9, 14, and 15 do not disclose or discuss of an audio sample pre-processor as claimed. In regards to item (4) above, Leeke's column 5, lines 17-48 (reproduced above) disclose a multimedia player that is responsive to a smart card, can cooperate with a browser program, or can include a stand-alone, application-

based software program. However, there is no reference to using the characterizing data, as claimed.

Accordingly, because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claims 24-28 depend from claim 23 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 23, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. Given the allowability of these claims, the rejection of claim 28 over the combination with Chang is not seen to add anything of significance.

Claim 31 was previously amended and recites a method of providing a visualization comprising:

- calling an audio sample pre-processor for characterizing data that has been derived from an associated audio sample that is currently being rendered by a media player renderer;
- calling the media player renderer for a time associated with a currently-rendered audio sample;
- using the time to select a data structure containing characterizing data associated with the currently-rendered audio sample; and
- providing the characterizing data to a component for rendering a visualization.

In making out the rejection of this claim, the Office argues that Leeke teaches:

(1) calling an audio sample pre-processor for characterizing data, and cites to column 5, lines 17-48;

(2) calling the media player renderer for a time associated with a currently-rendered audio sample, and cites to column 15, lines 27-64;

(3) using the time to select a data structure containing characterizing data associated with the currently-rendered audio sample, and cited to column 15, lines 27-64; and

(4) providing the characterizing data to a component for rendering a visualization, and cites to column 15, lines 27-64.

Applicant respectfully submits that Leeke does not disclose or suggest the subject matter of this claim. In regards to item (1) above, Leeke's column 5, lines 17-48 (reproduced above) discusses a multimedia player that is responsive to a smart card, can cooperate with a browser program, or can include a stand-alone, application-based software program. Accordingly, there is no reference or discussion of an audio sample pre-processor as claimed.

In regards to items (2)–(4), Leeke's column 15, lines 27-64 (reproduced above) describes a graphical user interface where various types of information can be displayed to assist a user in navigating. Missing from these cited portions is any teaching, disclosure or suggestion or using time to select a data structure containing characterizing data associated with the currently-rendered audio sample or providing the characterizing data to a component for rendering a visualization, as claimed. Furthermore, the Office offers no explanation as to why the Office has concluded that the cited portions of Leeke anticipate this claim.

Because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claims 32-33 depend from claim 31 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 31, are neither disclosed nor suggested in the references of record, either singly or in combination with one

another. Given the allowability of these claims, the rejection of claim 33 over the combination with Chang is not seen to add anything of significance.

Claims Rejected over Chang under §§ 102

Claim 29 was previously amended and recites a method of providing a visualization comprising:

- receiving multiple audio samples;
- pre-processing the audio samples before they are rendered by a media player renderer, the pre-processing comprising at least (1) using a Fast Fourier Transform to derive frequency data from the samples, and (2) associating a timestamp with each sample;
- maintaining frequency data and a timestamp for each sample in a data structure;
- determining when an audio sample is being rendered by a media player renderer by:
  - ascertaining a time associated with a currently-rendered sample; and
  - selecting a data structure having a timestamp that is nearest the time; and
  - providing frequency data associated with the selected data structure to a component configured to use the frequency data to render the visualization.

In making out the rejection of this claim, the Office argues that Chang teaches:

(1) receiving multiple audio samples, and cites to column 3, lines 22-65;

(2) pre-processing the audio samples as recited, and cites to column 6, lines 23-44;

(3) maintaining frequency data and a timestamp for each sample in a data structure as recited, and cites to column 7, lines 1-18; and

(4) determining when an audio sample is being rendered by a media player renderer as recited, and cites to column 7, lines 1-18.

Applicant respectfully submits that Chang does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (2) above, Chang's column 6, lines 23-44 shows a table titled "Structure of a File Information Block". Applicant has reproduced this portion of Chang below for the Office's convenience.

TABLE 2

Structure of a File Information Block

Field Name	Constant Value	Description
FFT_OBJECTNUM		Total number of objects in this file
FFT_SEQUENCENUM	3	Total number of web content units
FFT_TimeFormat	4	Time format of this file, frame or ms
FFT_EDITMEDIANAME	5	Media filename at design time
FFT_EDITFOILPATH	6	Foil directory name at design time
FFT_StreamMediaPath	7	Path name of the Encoded Media
FFT_THRESHOLD_288	8	Threshhold for 28.8 kbps connection
FFT_THRESHOLD_56	9	Threshhold for 56 kbps connection
FFT_THRESHOLD_56HIGH	10	Threshhold for more than 56 kps connection

This cited table does not disclose pre-processing the audio samples before they are rendered by a media player renderer, as claimed. Rather, it simply lists field names with a corresponding constant value and description for each. Nothing discloses or suggests pre-processing audio samples before they are rendered by a media player renderer or pre-processing comprising at least (1) using a Fast Fourier Transform to derive frequency data from the samples, and (2) associating a timestamp with each sample.

Applicant again notes that the Office has not explained the pertinence of these cited portions or fully and clearly stated the grounds for its rejection of this claim, as required.

In regards to items (3) and (4) above, column 7, lines 1-18 contains text describing a data record in the Media Information Block. In addition, Table 4 titled "Structure of a Media Information Block" is shown. Applicant has reproduced this portion of Chang below for the Office's convenience.

A data record in the Media Information Block **203** consists of five data fields. Each data field contains three values: the first is a constant value representing the field, the second is the length of the data value, and the third is the data value of the field. Table 4 gives the structure of a Media Information Block.

TABLE 4

Structure of a Media Information Block

Field Name	Constant Value	Description
VFT_URL	1	Media URL at play time
VFT_FILELEN	2	Length of the media file
VFT_FRAMERATE	3	Frame rate of the video
VFT_FRAMENUM	4	Frame number of the video
VFT_MEDIADURATION	8	Duration of the media

These various field descriptions do not teach maintaining frequency data and a timestamp for each sample in a data structure as claimed. In addition, there is no disclosure or discussion of determining when an audio sample is being rendered as claimed. Specifically, nothing indicates ascertaining a time associated with a currently rendered sample; selecting a data structure having a timestamp that is nearest the time; or providing frequency data, as claimed. No explanation is given by the Office in regards to its reasoning.

Because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claim 30 depends from claim 29 and is allowable as depending from an allowable base claim. This claim is also allowable for its own recited features which, in combination with those recited in claim 29, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 34 was previously amended and recites one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

- pre-process audio samples using a Fast Fourier Transform to derive from the audio samples frequency data, the audio samples being pre-processed before they are rendered by a media player renderer;
- query for frequency data that is associated with an audio sample that is currently being rendered by the media player renderer;
- query for a time associated with the currently-rendered audio sample;
- use the time to select a data structure containing frequency data associated with the currently-rendered audio sample; and
- provide the frequency data to a component that uses the frequency data for rendering a visualization.

In making out the rejection of this claim, the Office argues that Chang teaches:

(1) pre-process audio samples using a Fast Fourier Transform to derive from the audio samples frequency data as recited , and cites to column 6, lines 23-44;

(2) query for frequency data that is associated with an audio sample that is currently being rendered by the media player renderer, and cites to column 7, lines 1-18;

(3) query for a time associated with the currently-rendered audio sample, and cites to column 7, lines 1-18;

(4) use the time to select a data structure containing frequency data associated with the currently-rendered audio sample, and cites to column 7, lines 1-18; and

(5) provide the frequency data to a component that uses the frequency data for rendering a visualization, and cites to column 7, lines 1-18.

Applicant respectfully submits that Chang does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (1) above, column 6, lines 23-44 (reproduced above), the cited table does not disclose pre-processing the audio samples, as claimed. Regarding items (2)-(5) above, column 7, lines 1-18 (reproduced above) does not teach querying for frequency data, maintaining frequency data (as claimed) or querying for a time associated with the currently-rendered audio sample. In addition, Chang does not disclose or suggest using the time to select a data structure containing frequency data associated with the currently-rendered audio sample. Finally, Chang does not discuss providing the frequency data to a component that uses the frequency data for rendering a visualization. No explanation is given by the Office in regards to its reasoning.

Because this reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claim 35 was previously amended and recites a method of providing a visualization comprising:

- defining a frame rate at which visualization frames of a visualization are to be rendered, the visualization frames being rendered from characterizing data that is computed from audio samples and which is used to create the visualization;
- setting a threshold associated with an amount of time that is to be spent rendering a visualization frame;
- monitoring the time associated with rendering individual visualization frames;

- determining whether a visualization frame rendering time exceeds the threshold; and
- providing an effective frame rate for rendering visualization frames that is longer than the defined frame rate if the determined visualization frame rendering time exceeds the threshold.

In making out the rejection of this claim, the Office argues that ***Chang*** teaches the following :

(1) defining a frame rate at which visualization frames of a visualization are to be rendered as recited , and cites to column 3, lines 22-65;

(2) setting a threshold associated with an amount of time that is to be spent rendering a visualization frame, and cites to column 6, line 1 to column 7, line 18;

(3) monitoring the time associated with rendering individual visualization frames, and cites to column 6, line 1 to column 7, line 18;

(4) determining whether a visualization frame rendering time exceeds the threshold, and cites to column 6, line 1 to column 7, line 18; and

(5) providing an effective frame rate for rendering visualization frames as recited, and cites to column 6, line 1 to column 7, line 18.

Applicant respectfully submits that Chang does not disclose or suggest the subject matter of this claim. Specifically, with regards to item (1) above, column 3, lines 22-65 provides an expansive portion encompassing a summary of the Chang invention. The invention is characterized as concerning delivery of data from one or more sources. The invention comprises a content creation tool for preparing data, the format, and a player. Chang instructs that, a presentation proceeds without interruption; however pauses that invariably occur are handled so as to minimize the degradation of the overall experience.

Thus, as noted above, it is readily apparent that Chang is concerned about what and when particular content is being played rather than actually ***rendering a visualization***. This is reflected in the segment of the cited portion which reads:

> For example, if secondary data for an event has not been received by the time the player needs it, the primary media playback pauses and ***the player stops receiving primary media data until all the necessary secondary event data has arrived***. Once the necessary secondary event data has arrived, the player resumes it normal mode of operation.

Missing is any discussion of defining a frame rate at which visualization frames of a visualization are to be rendered, the visualization frames being ***rendered from characterizing data that is computed from audio samples*** and which is used to ***create*** the visualization.

In regards to items (2) – (5) above, the cited portion of columns 6 and 7 contain 4 tables and associated text. Some fields are labeled "FFT_THRESHOLD_...", but these fields do not teach or disclose a visualization comprising setting a threshold associated with an amount of time that is to be spent rendering a visualization frame. Similarly, nothing in this cited portion discusses: monitoring the time associated with rendering individual visualization frames; determining whether a visualization frame rendering time exceeds the threshold; or providing an effective frame rate for rendering visualization frames, as claimed.

Applicant is confused as to the Office's reasoning regarding the relevance of these cited portions, or even the Chang reference as a whole. Applicant notes that the Office has not explained the pertinence of the cited portions or fully and clearly stated the grounds for its rejection of this claim, as required. Because this

reference does not disclose or suggest the subject matter of this claim, this claim is allowable.

Claims 36 and 37 depend from claim 35 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 35, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 38 was previously amended and recites one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

- set a threshold associated with an amount of time that is to be spent rendering a visualization frame for a given frame rate, said visualization frame being associated with a visualization that is rendered using characterizing data computed from audio samples, which characterizing data is used to create the visualization;
- monitor the time associated with rendering individual visualization frames;
- determine whether a visualization frame rendering time exceeds the threshold; and
- provide an effective frame rate for rendering the visualization that is longer than the defined frame rate if the determined visualization frame rendering time exceeds the threshold.

In making out the rejection of this claim, the Office argues that ***Chang*** teaches the following:

> (1) set a threshold associated with an amount of time that is to be spent rendering a visualization frame for a given frame rate as claimed, and cites to column 6, line 1 to column 7, line 18;

(2) monitor the time associated with rendering individual visualization frames, and cites to column 6, line 1 to column 7, line 18;

(3) determine whether a visualization frame rendering time exceeds the threshold, and cites to column 6, line 1 to column 7, line 18; and

(4) provide an effective frame rate for rendering the visualization as recited, and cites to column 6, line 1 to column 7, line 18.

Applicant respectfully submits that Chang does not disclose or suggest the subject matter of this claim. As discussed above in regards to claim 35, column 6, line 1 to column 7, line 18 does not disclose or suggest the subject matter in this claim. Accordingly, this claim is allowable.

Conclusion

Applicant has made a sincere attempt to clarify the subject matter of the claims. Applicant sincerely wishes to advance prosecution in this matter. In the event the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully Submitted,

Dated: 10/14/04

By: _____

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